

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An optical pick-up device comprising:

a first light emitting element for emitting first light beams having a first wavelength;
a second light emitting element for emitting second light beams having a second wavelength;

a third light emitting element for emitting third light beams having a third wavelength;

a first collimator lens that changes one of the first, second, or third light beams emitted from the first, second, or third light emitting element into first rays of parallel light;

a second collimator lens that changes one of the first, second, or third light beams emitted from the first, second, or third light emitting element into second rays of parallel light;

a first optical system including a first object lens, and serving to converge, by the first object lens, the first rays of parallel light and to irradiate the light beams converged by the first object lens onto an optical disc;

a second optical system including a second object lens, and serving to converge, by the second object lens, the second rays of parallel light and to irradiate the light beams converged by the second object lens onto the optical disc;

an object lens drive unit including a bobbin that holds the first and second object lenses, and serves to allow the bobbin to undergo a drive displacement in a focusing direction perpendicular to a recording surface of the optical disc, a tracking direction which is a substantially radial direction of the optical disc, and one of a radial tilt direction in which movement is performed in a circular arc form on an axis of the radial direction and a

tangential tilt direction in which movement is performed in a circular arc form on an axis of a tangential direction which is a direction perpendicular to the radial direction; [[and]]

a comatic aberration correcting ~~means~~ device for correcting a comatic aberration of the second optical system relatively taking place with respect to the first optical system in one of the radial tilt direction and the tangential tilt direction, which is not controlled by the object lens drive unit, and the comatic aberration correcting ~~means~~ device is arranged in an optical path of the second optical system between the second collimator lens and the second object lens and out of an optical path of the first optical system;

a photo-detector for receiving light beams reflected from the optical disc; and
a control circuit connected to the photo-detector for controlling the comatic aberration connecting device in response to the detected reflected light beams.

Claim 2 (Currently Amended): The optical pick-up device according to claim 1, wherein the comatic aberration correcting ~~means~~ device corrects the comatic aberration by changing a refractive index of a region intersecting a path of one of the first, second, or third light beams.

Claim 3 (Original): The optical pick-up device according to claim 1, wherein the first wavelength is about 405 nm, the second wavelength is about 660 nm, and the third wavelength is about 785 nm.

Claim 4 (Previously Presented): The optical pick-up device according to claim 3, wherein the first light beams having the first wavelength are incident on the first object lens, and the second light beams having the second and third wavelengths are incident on the second object lens.

Claim 5 (Previously Presented): The optical pick-up device according to claim 1,
wherein a center of the second object lens and a center of the first object lens are held
at the bobbin along the tangential direction.

Claim 6 (Currently Amended): The optical pick-up device according to claim 1,
wherein the comatic aberration correcting ~~means~~ device includes a liquid crystal
correcting device.

Claim 7 (Currently Amended): An optical disc apparatus comprising:
a disc rotational operation ~~means~~ device for performing rotational operation of an
optical disc; and
an optical pick-up device configured to scan, by light beams, a signal recording
surface of an optical disc operated by the disc rotational operation means to perform
recording or reproduction of information,

the optical pick-up device comprising:

a first light emitting element for emitting first light beams having a first
wavelength[[],];

a second light emitting element for emitting second light beams having a
second wavelength[[],];

a third light emitting element for emitting third light beams having a third
wavelength[[],];

a first collimator lens that changes one of the first, second, or third light beams
emitted from the first, second, or third light emitting element into first rays of parallel
light;

a second collimator lens that changes one of the first, second, or third light beams emitted from the first, second, or third light emitting element into second rays of parallel light;

a first optical system including a first object lens, and serving to converge, by the first object lens, the first rays of parallel light and to irradiate the light beams converged by the first object lens onto the optical disc[[,]];

a second optical system including a second object lens, and serving to converge, by the second object lens, the second rays of parallel light and to irradiate the light beams converged by the second object lens onto the optical disc[[,]];

an object lens drive unit including a bobbin that holds the first and second object lenses, and serves to allow the bobbin to undergo a drive displacement in a focusing direction perpendicular to the recording surface of the optical disc, a tracking direction which is a substantially radial direction of the optical disc, and either one of a radial tilt direction in which movement is performed in a circular arc form on an axis in the radial direction and a tangential tilt direction in which movement is performed in a circular arc form on an axis of a tangential direction which is a direction perpendicular to the radial direction[[,]]; [[and]]

a comatic aberration correcting ~~means~~ device for correcting a comatic aberration of the second optical system relatively taking place with respect to the first optical system in one of the radial tilt direction and the tangential tilt direction, which is not controlled by the object lens drive unit, and the comatic aberration correcting ~~means~~ device is arranged in an optical path of the second optical system between the second collimator lens and the second object lens and out of an optical path of the first optical system;

a photo-detector for receiving light beams reflected from the optical disc; and
a control circuit connected to the photo-detector for controlling the comatic aberration
connecting device in response to the detected reflected light beams.

Claim 8 (Currently Amended): The optical disc apparatus according to claim 7,
wherein the comatic aberration correcting ~~means~~ device changes a refractive index of
a region intersecting a path of one of the first, second, or third light beams.

Claim 9 (Original): The optical disc apparatus according to claim 7,
wherein the first wavelength is about 405 nm, the second wavelength is about 660 nm,
and the third wavelength is about 785 nm.

Claim 10 (Previously Presented): The optical disc apparatus according to claim 9,
wherein the first light beams having the first wavelength are incident on the first
object lens, and the second and third light beams having the second and third wavelengths are
incident on the second object lens.

Claim 11 (Previously Presented): The optical disc apparatus according to claim 7,
wherein a center of the second object lens and a center of the first object lens are held
on the bobbin in along the tangential direction.

Claim 12 (Currently Amended): The optical disc apparatus according to claim 7,
wherein the comatic aberration correcting ~~means~~ device includes a liquid crystal
correcting device.

Claim 13 (Currently Amended): A method of controlling an optical pick-up device comprising:

emitting first light beams having a first wavelength from a first light emitting element;

emitting second light beams having a second wavelength from a second light emitting element;

emitting third light beams having a third wavelength from a third light emitting element;

collimating, with a first collimating lens, one of the first, second, or third emitted light beams emitted from the first, second, or third light emitting element to produce first rays of parallel light;

collimating, with a second collimating lens, one of the first, second, or third emitted light beams emitted from the first, second, or third light emitting element to produce second rays of parallel light;

converging, by a first optical system of the optical pick-up device including a first object lens, the first rays of parallel light and to irradiate the light beams converged by the first object lens onto an optical disc;

converging, by a second optical system of the optical pick-up device including a second object lens, the second rays of parallel light and to irradiate the light beams thus converged by the second object lens onto the optical disc;

holding the first and second object lenses in an object lens drive unit including a bobbin, and controlling the bobbin to undergo a drive displacement in a focusing direction perpendicular to a recording surface of the optical disc, a tracking direction which is a substantially radial direction of the optical disc, and one of a radial tilt direction in which movement is performed in a circular arc form on an axis in the radial direction and a

tangential tilt direction in which movement is performed in a circular arc form on an axis in a tangential direction which is a direction perpendicular to the radial direction; [[and]]

correcting, using a device arranged in an optical path of the second optical system between the second collimating lens and the second object lens and out of an optical path of the first optical system, a comatic aberration of the second optical system one of the radial tilt direction and the tangential tilt direction, which is not controlled by the object lens drive unit; receiving light beams reflected from the optical disc; and
controlling the comatic aberration in response to receipt of the reflected light beams.

Claim 14 (Previously Presented): The control method for the optical pick-up device according to claim 13, further comprising:

applying a voltage to a liquid crystal correcting device in the optical pick-up device to control a refractive index to correct the comatic aberration.

Claim 15 (Previously Presented): The optical pick-up device according to claim 1, wherein

each of the first and second object lenses includes a converging portion that converges light and a flange that connects to the bobbin surrounding the converging portion, and

a portion of the flange of one of the first and second object lenses is removed and the other one of the first and second object lenses is arranged to overlap the portion of the flange that is removed, so that a distance between the converging portion of the first object lens and the converging portion of the second object lens is equal to a width of the flange of the one of the first and second object lenses that is removed.

Claim 16 (Previously Presented): The optical pick-up device according to claim 7,
wherein

each of the first and second object lenses includes a converging portion that converges light and a flange that connects to the bobbin surrounding the converging portion, and

a portion of the flange of one of the first and second object lenses is removed and the other one of the first and second object lenses is arranged to overlap the portion of the flange that is removed, so that a distance between the converging portion of the first object lens and the converging portion of the second object lens is equal to a width of the flange of the one of the first and second object lenses that is removed.

Claim 17 (New): The optical pick-up device according to claim 1,

wherein the first optical system including a device for adjusting the first object lens to the bobbin so that comatic aberration in either one of the radial tilt direction and the tangential tilt direction becomes minimum.